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MCANDREWS HELD & MALLOY, LTD
500 WEST MADISON STREET
SUITE 3400
CHICAGO, IL 60661

EXAMINER	
BOAKYE, ALEXANDER O	

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2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/644,204	LUND, MARTIN	
	Examiner	Art Unit	
	ALEXANDER BOAKYE	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,11-13,15-24,27-29 and 31-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *32-40* is/are allowed.

6)☒ Claim(s) *1-7,12,13,16-23,28 and 29* is/are rejected.

7)☒ Claim(s) *8,11,15,24,27 and 31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/23/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1, 6, 7, 12-13, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregg et al. (US Patent # 5,944,797) in view of Gregg et al. (US Patent # 5,559,963).

Regarding claims 1, 6, Gregg ('797) teaches a method of providing word-level flow control in a communication system (Figs. 1), using a secondary communication channel comprising : establishing a bi-directional communications link (108) between a first system (102) and a second system (104), transmitting (116) a frame of data from the first system (102) to second system (104). Gregg ('797) differs from the claimed invention in that Gregg ('797) does not disclose suspending the transmission of the frame of data without waiting for the end of the frame when the first system receives a

stop transmission request embedded in a secondary communication channel between the second system and the first system. However, Gregg ('963) reference figure 9 discloses suspending the transmission of the frame of data without waiting for the end of the frame when the first system receives a stop transmission request embedded in a secondary communication channel between the second system and the first system (column 8,lines 54-64 and column 12,lines 20-22). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Gregg ('963) into the system of Gregg('797) in order to be able to improve system performance.

Claim 7 is met as previously discussed with respect to claim 1.

Regarding claim 12, Gregg ('797) further teaches that communication link has at least two lines (column 3, lines 45-48).

Regarding claim 13, Gregg ('797) further teaches that the communication link has four lanes (the claimed communication link with four lanes is inherent in the Fiber Optic Line).

Regarding claim 16, is met as previously discussed with respect to claim 1 above.

2. Claims 17, 20-23, 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregg et al. (US Patent # 5,944,797) in view of Bell (US Patent # 6,108,736).

Regarding claim 17, Gregg ('797) teaches a method of providing flow control in a communication system comprising (Fig. 1): establishing a bi-directional communication link (108) with a remote system. Gregg differs from the claimed invention in that Gregg does not teach embedding flow control data in a secondary communication channel of the communication link for use by a primary communication channel of the communication link. However, Bell teaches embedding flow control data in a secondary communication channel of the communication link for use by a primary communication channel of the communication link (column 6, lines 20-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Bell into the system of Gregg with motivation being that it provides overflow of data.

Regarding claim 20, Gregg ('797) teaches that the secondary communication channel comprises start and stop packet codes (column 8, lines 50-60; packet codes corresponds to instructions).

Regarding claim 21, Gregg ('797) teaches that the secondary communication channel comprises start/stop symbols (the claimed start/stop symbol is inherent in state machine of Gregg (797).

Regarding claim 22, Gregg ('797) teaches that the transmission is suspended at the end of a word within a frame (see 904 of Fig. 9).

Regarding claim 23, the claimed flow control data is embedded in a secondary communication channel of the communications link from the second system to the first system is inherent in Fig. 1 of Gregg ('797).

Regarding claim 28, Gregg ('797) further teaches that communication link has at least two lines (column 3, lines 45-48).

Regarding claim 29, Gregg ('787) teaches that the communication link has at least four lanes (the claimed communication link with four lanes is inherent in the Fiber Optic Line).

3. Claims 2-5, 7-8, 11, 18-21, 24, 27, 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregg (US Patent # 5, 944,797) in view of Gregg et al. (5,559,963) as applied to claim 1 above and further in view of Kryzak et al. (US Patent # 6,700,510).

Regarding claim 2, Gregg('797) as modified by Gregg('963) teaches all the claimed limitations as previously discussed with respect to claim 1 above

but fails to explicitly teach that the word level command is based on reversed running disparity coding. However, Kryzak discloses that the word level command is based on reversed running disparity coding (column 6, lines 29-34). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kryzak into the system of Gregg('797) as modified by Gregg ('969) in order to reduce delay.

Regarding claim 3, Gregg ('797) as modified by Gregg ('963) teaches all the claimed limitations as previously discussed with respect to claim 1 above but fails to explicitly teach that the word level command is constructed from a series of alternatively coded words. However, Kryzak discloses that the word level command is constructed from a series of alternatively coded words (Fig. 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kryzak into the system of Gregg ('797) as modified by Gregg ('963) in order to improve system performance.

Regarding claim 4, Gregg as modified by Gregg ('963) teaches all the claimed limitations as previously discussed with respect to claim 1 above but fails to explicitly teach that the secondary communication channel comprises start and stop packet codes. However, Kryzak discloses that the secondary

communication channel comprises start and stop packet codes (column 7, lines 33-37). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kryzak into the system of Gregg ('797) as modified by Gregg ('963) in order to improve network performance.

Claims 5, are met as previously discussed with respect to claim 4.

4. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregg et al. (US Patent # 5,944,797) in view of Bell (US Patent # 6,108,736) as applied to claim 17 above, and further in view of Kryzak et al. (US Patent # 6,700,510).

Regarding claim 18, Gregg ('797) as modified by Bell teaches all the claimed limitations as previously discussed with respect to claim 17 above ,but fails to explicitly teach that the embedded floe control data comprises a data word having a reversed running disparity coding. However, Kryzak teaches that the embedded flow control data comprises a data word having a reversed running disparity coding (column 6, lines 29-34). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kryzak into the system of Gregg('797) as modified by bell in order to reduce delay.

Regarding claim 19, Gregg ('797) as modified by Bell teaches all the claimed limitations as previously discussed with respect to claim 17 above

,but fails to explicitly teach that the embedded flow control data comprises a data word having alternative coding. However, Kryzak teaches that the embedded flow control data comprises a data word having alternative coding (See Fig. 5). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teachings of Kryzak into the system of Gregg('797) as modified by bell in order to reduce delay.

Regarding claim 20, Gregg ('797) teaches that the secondary communication channel comprises start and stop packet codes (the claimed start and stop packet codes are inherent in the state machine of Greggg).

Allowable Subject Matter

5. Claims 8, 11, 15, 24, 27, 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 32-34, 35-40 are allowable.

Response to Arguments

6. Applicant's arguments with respect to claim 1-8,11-13,15-24,27-29,31-40 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (571) 272-3183. The examiner can normally be reached on M-F from 8:30am to 6:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (571) 272-3179. The Fax number is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Electronic Business Center (EBC)** numbers at 866-217-9197 and 703-305-3028.

Alexander Boakye

Patent Examiner

AB

11/25/07

CHI PHAM
SUPERVISORY PATENT EXAMINER

11/30/07